REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering the present application and indicating that claims 23, 24, and 26-34 contain allowable subject matter.

Disposition of Claims

Claims 1-41 were pending in the present application. By way of this reply, claims 3 and 18 have been cancelled. Accordingly, claims 1, 2, 4-17, and 19-41 are now pending in the present application. Claims 1, 17, and 36 are independent claims. Claims 2 and 4-16 are dependent, either directly or indirectly, from claim 1. Claims 19-35 are dependent, either directly or indirectly, from claim 17. Claims 37-41 are dependent, either directly or indirectly, from claim 36.

Claim Amendments

Claims 1, 17, 23, 24, and 26-29 have been amended by way of this reply. Claim 1 has been amended to include the limitations of now canceled dependent claim 3, and claim 17 has been amended to include the limitations of now canceled claim 18. Further, claims 23 and 24 have been amended to depend on claim 17 instead of now canceled claim 18. Claims 26-29 have been amended to correct the antecedent basis issues caused by incorporating the limitations of claim 18 into claim 17. No new matter has been added by way of these amendments.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 23, 24, and 26-34 contain allowable subject matter. In view of the amendments to claim 17 and the arguments regarding the patentability of claim 17 below, Applicant defers rewriting these claims into independent form at this time.

Rejections Under 35 U.S.C. § 102

Claims 1-22, 25, and 35-41 of the present application were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,507,862 ("Joy"). Claims 3 and 18 have been canceled. For the remaining claims, this rejection is respectfully traversed.

Joy discloses a processor including a logic for attaining a fast exception handling functionality while executing non-threaded programs by invoking a multithreaded-type functionality in response to an exception condition. Specifically, lines 41-67 of column 10 and Figure 4A merely disclose a multiple-bit flip-flop storage block having a storage header block and a multiple-bit flip-flop block, wherein a combined scan enable and clock enable signal is supplied along with a clock signal and a thread identifier signal from an external source. Applicant respectfully submits that Joy fails to disclose or suggest all of the limitations required by the claims, as amended.

Amended claim 1 requires, in part, "the multi-function signal comprises a scan enable function, a clock enable function, and a clock disable function."

This limitation was incorporated into claim 1 from now canceled claim 3. In rejecting claim 3, the Examiner points to lines 41-67 of column 10 in Joy as teaching all the limitations in the claim. However, the cited passage and, in fact, the remainder of the reference are silent regarding the multi-function signal comprising a clock *disable* function, as required by

the claim. The combined signal in Joy only includes a scan enable signal and a clock enable signal. Thus, claim 1, as amended, is patentable over Joy, at least for the above reasons.

Claim 2 requires, in part, "header circuitry which distinguishes between different functionalities exhibited by the multi-functional signal."

Lines 41-67 of column 10 were relied upon to teach all the limitations in claim 2, but the cited passage, and in fact, the remainder of the reference, are silent regarding a header circuitry, or any element distinguishing between different functionalities exhibited by the multi-function signal. Further, claim 2 is dependent from claim 1. Thus, claim 2 is patentable over Joy, at least for the above reasons.

Claim 9 requires, in part, "the external pulse signal is used by the data storage block as a time reference for operations in a normal mode."

Lines 41-67 of column 10 were again relied upon to teach all the limitations in claim 9, but the cited passage, and in fact, the remainder of the reference, are silent regarding an external pulse signal being used as a time reference for operations in a normal mode. In fact, Joy never distinguishes normal mode from scan mode. Further, claim 9 is indirectly dependent from claim 1. Thus, claim 9 is patentable over Joy, at least for the above reasons.

Claim 10 requires, in part, "the inverted external pulse signal is used by the data storage block to facilitate operations in a normal mode."

Lines 41-67 of column 10 were again relied upon to teach all the limitations in claim 10, but the cited passage, and in fact, the remainder of the reference, are silent regarding an external pulse signal being used to facilitate operations in a normal mode. As mentioned earlier, Joy never distinguishes normal mode from scan mode. Further, claim 10 is indirectly dependent from claim 1. Thus, claim 10 is patentable over Joy, at least for the above reasons.

Claim 11 requires, in part, "the scan clock signal is used by the data storage block as a time reference for operations in a scan mode."

Lines 41-67 of column 10 were again relied upon to teach all the limitations in claim 11, but the cited passage, and in fact, the remainder of the reference, are silent regarding a scan clock signal being used as a time reference for operations in a scan mode. Again, Joy never distinguishes normal mode from scan mode. Further, claim 11 is indirectly dependent from claim 1. Thus, claim 11 is patentable over Joy, at least for the above reasons.

Claim 16 requires, in part, "the header block controls a plurality of modes in which the data storage block may operate."

Lines 41-67 of column 10 were relied upon to teach all the limitations in claim 16, but the cited passage, and in fact, the remainder of the reference, are silent regarding the header block controlling a plurality of modes. As mentioned previously, Joy never distinguishes normal mode from scan mode, and therefore also does not mention the header block controlling the modes. Further, claim 16 is indirectly dependent from claim 1. Thus, claim 16 is patentable over Joy, at least for the above reasons.

Claims 4-8, 12, and 13-15 are either directly indirectly dependent from claim 1. Thus, claims 4-8, 12, and 13-15 are patentable over Joy, at least for the same reasons as claim 1.

Amended claim 17 requires, in part, "the multi-function signal can serve as a scan enable function, a clock enable function, and a clock disable function."

This limitation was incorporated into claim 17 from now canceled claim 18. In rejecting claim 18, the Examiner points to Figure 4A and lines 41-67 of column 10 in Joy as teaching all the limitations in the claim. However, the cited figure and passage, and in fact, the remainder of the reference, are silent regarding the multi-function signal being able to serve as a

clock *disable* function, as required by the claim. In fact, Joy makes no mention of a clock-disable function. Thus, claim 17 is patentable over Joy, at least for the above reasons.

Claim 20 requires, in part, "the data storage block operates in one of the plurality of operation modes dependent upon the signals generated from the header block."

Figure 4A and lines 41-67 of column 10 were relied upon to teach all the limitations in claim 20, and in fact, the only mention of the header block in Joy is in the cited passage. However, the cited passage never mentions operation modes, and as the rest of the reference is silent regarding a header block, the reference fails to disclose the above limitations. Further, claim 20 is indirectly dependent from claim 17. Thus, claim 20 is patentable over Joy, at least for the above reasons.

Claim 22 requires, in part, "the plurality of operation modes comprise a normal mode and a scan mode."

Figure 4A and lines 41-67 of column 10 were again relied upon to teach all the limitations in claim 22, but as mentioned previously, the cited figure and passage, and in fact, the remainder of the reference, fail to disclose a normal mode and a scan mode. Further, claim 22 is indirectly dependent from claim 17. Thus, claim 22 is patentable over Joy, at least for the above reasons.

Claims 19, 21, 25, and 35 are directly dependent from claim 17. Thus, claim 19, 21, 25, and 35 are patentable over Joy, at least for the same reasons as claim 17.

Claim 36 requires, in part, "means for distinguishing between different functionalities of the multi-function signal to determine which of a plurality of functions the multi-function serves" and "means for generating a plurality of signals based on the determination of which of

the plurality of functions the multi-function serves, the clock signal, and the global thread identifier signal."

Figure 4A and lines 41-67 of column 10 were again relied upon to teach all the limitations in claim 36, but the cited figure and passage, and in fact the remainder of the reference, fail to disclose a means for distinguishing between different functionalities of the multi-function signal. Thus, claim 36 is patentable over Joy, at least for the above reasons.

Claims 37-41 are dependent, either directly or indirectly, from claim 36. Thus, claims 37-41 are patentable over Joy, at least for the same reasons as claim 36. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-22, 25, and 35-41 of the present application were rejected under 35 U.S.C. § 102(a) as being anticipated by PCT Application No. WO00/68780 ("Joy-PCT"). Claims 3 and 18 have been canceled. For the remaining claims, this rejection is respectfully traversed.

Amended claim 1 requires, in part, "the multi-function signal comprises a scan enable function, a clock enable function, and a clock disable function."

This limitation was incorporated into claim 1 from now canceled claim 3. In rejecting claim 3, the Examiner points to line 19 of page 14 through line 5 of page 15 in Joy-PCT as teaching all the limitations in the claim. However, the cited passage and, in fact, the remainder of the reference are silent regarding the multi-function signal comprising a clock *disable* function, as required by the claim. The combined signal in Joy-PCT only includes a scan enable signal and a clock enable signal. Thus, claim 1, as amended, is patentable over Joy-PCT, at least for the above reasons.

Claim 2 requires, in part, "header circuitry which distinguishes between different functionalities exhibited by the multi-functional signal."

Line 19 of page 14 through line 5 of page 15 were relied upon to teach all the limitations in claim 2, but the cited passage, and in fact, the remainder of the reference, are silent regarding a header circuitry, or any element distinguishing between different functionalities exhibited by the multi-function signal. Further, claim 2 is dependent from claim 1. Thus, claim 2 is patentable over Joy-PCT, at least for the above reasons.

Claim 9 requires, in part, "the external pulse signal is used by the data storage block as a time reference for operations in a normal mode."

Line 19 of page 14 through line 5 of page 15 were again relied upon to teach all the limitations in claim 9, but the cited passage, and in fact, the remainder of the reference, are silent regarding an external pulse signal being used as a time reference for operations in a normal mode. In fact, Joy-PCT never distinguishes normal mode from scan mode. Further, claim 9 is indirectly dependent from claim 1. Thus, claim 9 is patentable over Joy-PCT, at least for the above reasons.

Claim 10 requires, in part, "the inverted external pulse signal is used by the data storage block to facilitate operations in a normal mode."

Line 19 of page 14 through line 5 of page 15 were again relied upon to teach all the limitations in claim 10, but the cited passage, and in fact, the remainder of the reference, are silent regarding an external pulse signal being used to facilitate operations in a normal mode. As mentioned earlier, Joy-PCT never distinguishes normal mode from scan mode. Further, claim 10 is indirectly dependent from claim 1. Thus, claim 10 is patentable over Joy-PCT, at least for the above reasons.

Claim 11 requires, in part, "the scan clock signal is used by the data storage block as a time reference for operations in a scan mode."

Line 19 of page 14 through line 5 of page 15 were again relied upon to teach all the limitations in claim 11, but the cited passage, and in fact, the remainder of the reference, are silent regarding a scan clock signal being used as a time reference for operations in a scan mode. Again, Joy-PCT never distinguishes normal mode from scan mode. Further, claim 11 is indirectly dependent from claim 1. Thus, claim 11 is patentable over Joy-PCT, at least for the above reasons.

Claim 16 requires, in part, "the header block controls a plurality of modes in which the data storage block may operate."

Line 19 of page 14 through line 5 of page 15 were relied upon to teach all the limitations in claim 16, but the cited passage, and in fact, the remainder of the reference, are silent regarding the header block controlling a plurality of modes. As mentioned previously, Joy-PCT never distinguishes normal mode from scan mode, and therefore also does not mention the header block controlling the modes. Further, claim 16 is indirectly dependent from claim 1. Thus, claim 16 is patentable over Joy-PCT, at least for the above reasons.

Claims 4-8, 12, and 13-15 are either directly indirectly dependent from claim 1. Thus, claims 4-8, 12, and 13-15 are patentable over Joy-PCT, at least for the same reasons as claim 1.

Amended claim 17 requires, in part, "the multi-function signal can serve as a scan enable function, a clock enable function, and a clock disable function."

This limitation was incorporated into claim 17 from now canceled claim 18. In rejecting claim 18, the Examiner points to Figure 4A and Line 19 of page 14 through line 5 of

page 15 in Joy-PCT as teaching all the limitations in the claim. However, the cited figure and passage, and in fact, the remainder of the reference, are silent regarding the multi-function signal being able to serve as a clock *disable* function, as required by the claim. In fact, Joy-PCT makes no mention of a clock-disable function. Thus, claim 17 is patentable over Joy-PCT, at least for the above reasons.

Claim 20 requires, in part, "the data storage block operates in one of the plurality of operation modes dependent upon the signals generated from the header block."

Figure 4A and Line 19 of page 14 through line 5 of page 15 were relied upon to teach all the limitations in claim 20, and in fact, the only mention of the header block in Joy-PCT is in the cited passage. However, the cited passage never mentions operation modes, and as the rest of the reference is silent regarding a header block, the reference fails to disclose the above limitations. Further, claim 20 is indirectly dependent from claim 17. Thus, claim 20 is patentable over Joy-PCT, at least for the above reasons.

Claim 22 requires, in part, "the plurality of operation modes comprise a normal mode and a scan mode."

Figure 4A and lines 41-67 of column 10 were relied upon to teach all the limitations in claim 22. Applicant assumes the Examiner meant line 19 of page 14 through line 5 of page 15, not lines 41-67 of column 10. As mentioned previously, the cited figure and passage, and in fact, the remainder of the reference, fail to disclose a normal mode and a scan mode. Further, claim 22 is indirectly dependent from claim 17. Thus, claim 22 is patentable over Joy-PCT, at least for the above reasons.

Claims 19, 21, 25, and 35 are directly dependent from claim 17. Thus, claim 19, 25, and 35 are patentable over Joy-PCT, at least for the same reasons as claim 17.

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Claim 36 requires, in part, "means for distinguishing between different functionalities of the multi-function signal to determine which of a plurality of functions the multi-function serves" and "means for generating a plurality of signals based on the determination of which of the plurality of functions the multi-function serves, the clock signal, and the global thread identifier signal."

Figure 4a and line 19 of page 14 through line 5 of page 15 were again relied upon to teach all the limitations in claim 36, but the cited figure and passage, and in fact the remainder of the reference, fail to disclose a means for distinguishing between different functionalities of the multi-function signal. Thus, claim 36 is patentable over Joy-PCT, at least for the above reasons.

Claims 37-41 are dependent, either directly or indirectly, from claim 36. Thus, claims 37-41 are patentable over Joy-PCT, at least for the same reasons as claim 36. Accordingly, withdrawal of this rejection is respectfully requested.
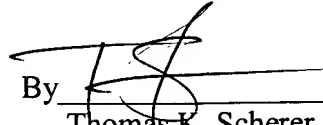
Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places the present application in condition of allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account No. 50-0591, under Order No. 03226/049001 from which the undersigned is authorized to draw.

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Respectfully submitted,

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